

MATH G056N: LINEAR SYSTEMS

Item	Value
Curriculum Committee Approval Date	03/04/2025
Top Code	170200 - Mathematics Skills
Units	0 Total Units
Hours	6-10 Total Hours (Lecture Hours 0; Lab Hours 6-10)
Total Outside of Class Hours	0
Course Credit Status	Noncredit: Support Course (U)
Material Fee	No
Basic Skills	Basic Skills (B)
Repeatable	Yes; Repeat Limit 99
Open Entry/Open Exit	Yes
Grading Policy	P/NP/SP Non-Credit (D)

Course Description

This noncredit course introduces the basic concepts of solving systems of linear equations in two variables and is designed to provide complementary and support college-level mathematics courses. COREQUISITE: MATH G100, MATH G103, MATH G104, MATH G115, MATH G115S, MATH G120, MATH G140, MATH G140S, MATH G170, MATH G180, MATH G185, MATH G280, MATH G285, MATH G287, STAT C1000, STAT C1000E, PSYC G140, SOC G125, or ECON G160. Open Entry/Open Exit. NOT DEGREE APPLICABLE. Not transferable.

Course Level Student Learning Outcome(s)

1. Course Outcomes
2. Solve a system of two linear equations in two variables.

Course Objectives

- 1. Deduce the quantity of solutions to a linear system.
- 2. Solve a system of linear equations in two variables using the methods of graphing, substitution, and addition.
- 3. Solve application problems represented by a linear system.

Lecture Content

Lab Content

Introduction to Linear Systems Definition of a linear system of two variables Types of Solutions One solution No solution Infinitely many solutions Graphical Interpretation of Solutions Solving Linear Systems Methods Substitution Addition/Elimination Graphing Applications Real-life examples

Method(s) of Instruction

- Enhanced NC Lab (NC2)
- Online Enhanced NC Lab (NC6)

Reading Assignments

Textbook and instructor's handouts

Writing Assignments

Writing up solution methods to course concept problems within assignments and course assessments.

Out-of-class Assignments

Demonstration of Critical Thinking

Students will demonstrate critical thinking and problem-solving skills by solving, analyzing, and interpreting systems of linear equations in two variables. Such as deducing the quantity of solutions and strategical implementation of a solving process. Demonstrations will be shown by completing assignments, participating in discussions, and completing required assessments.

Required Writing, Problem Solving, Skills Demonstration

Students will demonstrate their problem-solving skills through completing assignments and course assessments by showing their step-by-step processes to solving problems from start to finish.

Eligible Disciplines

Mathematics: Master's degree in mathematics or applied mathematics OR bachelor's degree in either of the above AND master's degree in statistics, physics, or mathematics education OR the equivalent. Master's degree required.

Textbooks Resources

1. Required Marecek, L., Smith, M., Mathis, A. Elementary Algebra, 2nd ed. OpenStax (OER), 2024 Legacy Textbook Transfer Data: .